UNITED STATES PATENT AND TRADEMARK OFFICE

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EXAMINER
PADMANABHAN, KAVITA

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Office Action Summary	**Application No.** 10/026,144	**Applicant(s)** METS ET AL.
		Examiner Kavita Padmanabhan	**Art Unit** 2161

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _26 October 2007_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _3-12,15-24 and 26-31_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _3-12,15-24 and 26-31_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _26 May 2006_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Status of Claims

1.   Claims 5, 6, 17, and 26-31 have been amended.

2.   Claims 3-12, 15-24, and 26-31 are pending.

3.   Claims 3-12, 15-24, and 26-31 are rejected.

Continued Examination Under 37 CFR 1.114

4.   A request for continued examination under 37 CFR 1.114, including the fee set forth in

37 CFR 1.17(e), was filed in this application after final rejection. Since this application is

eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e)

has been timely paid, the finality of the previous Office action has been withdrawn pursuant to

37 CFR 1.114. Applicant's submission filed on 10/26/07 has been entered.

Claim Objections

5.   **Claim 27** is objected to because of the following informalities:

In regards to **claim 27**, it is suggested that the phrase "and" at line 3 of step (a) be

changed to --and/or—to avoid antecedent basis problems in the claim.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

6.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making
and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it

pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7.   **Claims 3-12, 15-24, and 26-31** rejected under 35 U.S.C. 112, first paragraph, as failing

to comply with the written description requirement. The claim(s) contains subject matter which

was not described in the specification in such a way as to reasonably convey to one skilled in the

relevant art that the inventor(s), at the time the application was filed, had possession of the

claimed invention.

With respect to **claims 26-28**, there does not appear to be support in the applicant's

specification for the limitation, "wherein said plurality of storage volumes comprises first and

second storage volumes that are organized for said first activity or for said first event type and

for storage of values of first and second ones of said attributes, respectively, of said first activity

or of said first event type". The applicant has pointed to page 12, lines 13-24 for support.

However, this portion of the specification does not even mention a plurality of storage volumes,

much less the details of their organization.

With respect to **claims 26-28**, there does not appear to be support in the applicant's

specification for the limitation, "in response to a request, which identifies said first activity type

or said first event type and said first attribute, to retrieve from said first storage volume one or

more values of said first attribute and, in response to a request, which identifies said first activity

type or said first event type and said second attribute to retrieve from said second storage volume

one or more values of said second attribute". The applicant has pointed to page 12, lines 13-24

for support. However, this portion of the specification does not even mention a request, much

less the details of retrieving data from different storage volumes.

With respect to **claims 29-31**, there does not appear to be support in the applicant's specification for "wherein an output of said industrial process is a time varying signal, and wherein said monitor comprises at least one sensor that receives said time varying signal and provides it to said computer as at least a portion of said output data". The applicant has pointed to portions of the specification for support, but these portions do not mention a "time varying signal" or a "sensor".

8.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9.   **Claims 3-12, 15-24, and 26-31** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In regards to **claims 26-28**, the limitation "wherein said plurality of storage volumes comprises first and second storage volumes that are organized for said first activity or for said first event type and for storage of values of first and second ones of said attributes, respectively, of said first activity or of said first event type" renders the claims unclear. Based on the wording of the limitation, for the purposes of examination, the examiner is going to assume that the applicant is claiming that the first and second storage volumes are used to organize the activity or event data and the attributes values.

The examiner will apply prior art to this claim as best understood in light of the above rejections.

Claim Rejections - 35 USC § 103

10.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

11.   This application currently names joint inventors. In considering patentability of the

claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various

claims was commonly owned at the time any inventions covered therein were made absent any

evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out

the inventor and invention dates of each claim that was not commonly owned at the time a later

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c)

and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

12.   **Claims 3-12, 15-24, and 26-31** are rejected under 35 U.S.C. 103(a) as being unpatentable

over **Goldring** (US 5,613,113).

In regards to **claim 26, Goldring** teaches a method for using a computer to define, store

and retrieve data of an industrial process, said method comprising:

collecting with a monitor said output data of said industrial process and providing said

data of said industrial process to said computer **(Goldring; col. 1, lines 38-41; col. 3, lines 27-31**

– *"computer process that involves a sequence of events would be a commercial order filling or*

banking system" **and** *"correlate events in an activity log with time series data of interest"* –

constitutes collecting and operating on data of an industrial process in that the data

pertains to the "commercial industry" or the "banking industry.");

        operating said computer with a program

                (a) to identify, in response to input data entered by a user, one or more events

and/or activities of said industrial process and one or more attributes of said

events and/or activities **(Goldring; col. 3, lines 36-58; col. 5, lines 53-56 –**

"identifying the recorded events having the characteristic of interest" **and** *"user*

*can interactively communicate with the data base manager"***)**;

(b) to classify said events, activities and attributes that are identified by step (a)

according to a data structure that comprises at least a first event type or at least a

first activity type and a plurality of attribute types therefore **(Goldring; col. 8,**

line 60 – col. 9, line 14; Fig. 3 – figure 3 shows a data structure having event

types, such as update events, and a plurality of attribute types, such as event

name and RBA);

(c) to organize a plurality of storage volumes of said database for said classified

attribute types, wherein said plurality of storage volumes comprises first and

second storage volumes that are organized for said first activity or for said first

event type and for storage of values of first and second ones of said attributes,

respectively, of said first activity or of said first event type **(Goldring; Fig. 2; col.**

5, lines 2-23 – *"the mainframe computer 12 includes a data base comprising a*

*plurality of data tables 26 including user tables 28 defined by the users"***)**;

(d) to use said data structure in a manner that permits access to said organized

storage volumes of said database by said activities, events and attributes that are

identified by step (a) to store said data of said industrial process in said storage

volumes according to said data structure and, in response to a request, which

identifies said first activity type or said first event type and said first attribute, to

retrieve from said first storage volume one or more values of said first attribute

**(Goldring; col. 5, lines 2-23, 48-59; col. 6, lines 18-20; col. 9, lines 52-60; Fig.

3 –** *"If the activity log is later consulted, the time stamp values can be located*

with their corresponding transaction sequence numbers and accessed by users."

- events and attributes are stored in the database tables and are retrieved

based on user requests); and

(e) to provide said retrieved output data to a client device **(Goldring; col. 5, lines**

48-59; col. 9, lines 52-60; Fig. 3 – *"The data base manager 30, for example, can*

comprise a software process that operates in accordance with Structures Query

Language (SQL) requests", *"provides an interface for the users. A user can*

interactively communicate with the data base manager", and *"when a user*

requests a snapshot copy" **– data is retrieved from database and provided to**

user).

Goldring does not expressly teach in response to a request, which identifies said first

activity type or said first event type *and said second attribute* to retrieve *from said second*

storage volume one or more values of said second attribute.

However, since Goldring teaches the database being implemented as a plurality of user

defined tables, which constitute storage volumes, and teaches requesting specific data from the

plurality of tables (**Goldring; col. 5, lines 2-23, 48-59; col. 6, lines 18-20; col. 9, lines 52-60;**

Fig. 3), it would have been obvious to one of ordinary skill in the art at the time of the

applicant's invention to store data relating to different attributes in different tables, in an effort to

allow for flexible and efficient storage of data in the database, whereby a request specifying an

attribute whose data is stored in a second storage volume of the database would obviously result

in the corresponding data being retrieved from the second storage volume.

In regards to **claim 3**, **Goldring** teaches the method of claim 26, wherein at least one of

said classified attribute types is a start time (**Goldring; Fig. 3**), and wherein at least one of said

storage volumes is accessed according to said start time type for storage and retrieval of values

of said attributes corresponding to at least one of said events and/or activities (**Goldring; col. 5,**

lines 40-44; col. 6, lines 18-20; Fig. 3).

In regards to **claim 4**, **Goldring** teaches the method of claim 26, wherein at least one

attribute of a plurality of said events and/or activities is common to at least one of said defined

attribute types, and wherein said at least one storage volume of said database is allocated to all of

said common attributes (**Goldring; col. 8, line 60 – col. 9, line 14; Fig. 3; Fig. 2, reference**

characters 25, 32).

In regards to **claim 5, Goldring** teaches the method of claim 26, further comprising compressing said data of said industrial process which is stored in a first one of said storage volumes according to identity of values of said data of said industrial process of said attributes of consecutive events and/or activities that have been allocated for storage in said first one of said storage volumes **(Goldring; col. 7, lines 20-61 – data of activity log is compressed and placed in the system tables based on the values of the event attributes)**.

In regards to **claim 6, Goldring** teaches the method of claim 5, wherein said data structure further comprises a time stamp **(Goldring; Fig. 3)**, and wherein said first one of said storage volumes is accessed according to said time stamp for storage and/or retrieval of said values of said data of said industrial process, and wherein said values of said data of said industrial process of a first event are retrieved from said first storage volume by using a value of a first time stamp for said first event or of a second time stamp value of a second one of said events that is earlier in time than said first time stamp value **(Goldring; col. 5, lines 40-44; col. 6, lines 18-20; Fig. 3)**.

In regards to **claim 7, Goldring** teaches the method of claim 26, wherein a value of an attribute that is always the same for a specific one of said event or activity types is classified as static, and further comprising optimizing data storage in said first one of said storage volumes by omitting storage of a static value **(Goldring; col. 5, lines 7-16; col. 5, line 67 – col. 6, line 6 – doesn't store the other attributes related to the user table that changed – only the update and the sequence number, because the others didn't change, and are therefore static)**.

In regards to **claim 8, Goldring** teaches the method of claim 26, wherein said industrial

process is one of a plurality of industrial processes, and wherein said program operates said

computer each of said plurality of processes using said data structure **(Goldring; col. 1, lines 25-**

52; col. 6, lines 26-29).

In regards to **claim 9, Goldring** teaches the method of claim 8, wherein at least two of

said plurality of industrial processes are different from one another **(Goldring; col. 1, lines 25-**

52; col. 6, lines 26-29).

In regards to **claim 10, Goldring** teaches the method of claim 26, further comprising

presenting data values of different ones of said events and/or activities that are defined as

different event and/or activity types in any one of a plurality of formats to said client device

(Goldring; col. 6, lines 18-20; col. 5, lines 48-59; col. 9, lines 52-60; Fig. 3).

In regards to **claim 11, Goldring** teaches the method of claim 10, wherein said plurality

of formats are selected from the group consisting of: row format, column format and chart format

(Goldring; Fig. 3).

In regards to **claim 12, Goldring** teaches the method of claim 26, further comprising

developing a map structure for mapping diverse external names of said attributes and/or field

contents thereof to a common internal attribute name and/or field content **(Goldring; col. 5, lines**

30-31; col. 5, line 59 – col. 6, line 6; col. 6, lines 54-65; Fig. 3; Fig. 4; – updates, regardless of what type or how they are referred to externally, by a user for example, are internally stored as update operations; also, a table constitutes a map structure).

In regards to **claim 30, Goldring** teaches the method of claim 26, wherein a portion of said data of said industrial process is a time varying signal, and wherein said monitor comprises at least one sensor that receives said time varying signal and provides it to said computer **(Goldring; col. 3, lines 36-58).**

Claims 27, 15-24, and 31 are rejected with the same citations given for claims 26, 3-12, and 30, respectively.

Claims 28 and 29 are rejected with the same citations given for claim 26 and 30, respectively.

Response to Amendment

13.   Applicant's amendments filed 10/26/07 with respect to the 35 USC 112, 1st paragraph rejections have been fully considered. Some of the rejections have been withdrawn accordingly, while others have been maintained, as explained above. Furthermore, new amendments to the claims have precipitated new rejections as well.

14.   Applicant's arguments filed 10/26/07 with respect to the 35 USC 112, 2nd paragraph rejections prior art rejections have been fully considered. While the previous rejections have been withdrawn, new amendments to the claims have precipitated new rejections.

Response to Arguments

15.   Applicant's arguments filed 10/26/07 with respect to the prior art rejections have been

considered but are moot in view of the new ground(s) of rejection.

Conclusion

16.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to **Kavita Padmanabhan** whose telephone number is **571-272-**

8352. The examiner can normally be reached on Monday-Friday, 9:00am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Apu Mofiz can be reached on 571-272-4080. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

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like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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